Enzymes

1) Why are enzymes globular proteins? (3)
2) Explain how the induced fit model differs from the lock and key version? (3)
3) Describe how a non-competitive inhibitor works? (3)
4) Describe how a competitive inhibitor works? (3)
5) What are the differences between the two types of enzyme inhibition? (4)
6) What factors affect the rate of enzyme controlled reactions and why? Draw a graph for each answer. (4)
7) What are the advantages and disadvantages of immobilising enzymes? (4)
8) How can enzymes be immobilised? (3)
9) Give 3 applications of immobilised enzymes? (3)
10) Explain how a biosensor can be used to detect blood glucose in diabetics? Use a diagram to help support your answer. (4)
11) What is a biosensor? (2)
12) Describe the structure and function of enzymes? (3)
13) Draw a graph of rate of reaction against substrate concentration to show how the rate of reaction varies with no inhibitor present, competitive inhibitor present, and non-competitive inhibitor present? Explain your answer clearly. (5)
14) Describe how competitive inhibition can be reversed and why? (3)
15) Why is non-competitive inhibition irreversible? (2)
16) What is a co-enzyme? (2)
17) What is denaturing of an enzyme and give examples of what causes an enzyme to denature? (3)
18) What effect will a mutation have on an enzyme and why? (3)
19) Suggest how painkillers can function as competitive inhibitors? (3)

Total: **/60**